

**OCD – HOBBS**  
**06/21/2016**  
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# **WESTERN DIVISION**

**PBNM**

**Dzurisin**

**Thistle Unit 110H**

**Wellbore #1**

**Plan: Plan 1**

## **Standard Planning Report**

**20 June, 2016**

**Devon Energy**  
Planning Report

|                  |                         |                                     |                        |
|------------------|-------------------------|-------------------------------------|------------------------|
| <b>Database:</b> | EDM r5000 US Production | <b>Local Co-ordinate Reference:</b> | Well Thistle Unit 110H |
| <b>Company:</b>  | WESTERN DIVISION        | <b>TVD Reference:</b>               | 1 @ 3734.70ft          |
| <b>Project:</b>  | PBNM                    | <b>MD Reference:</b>                | 1 @ 3734.70ft          |
| <b>Site:</b>     | Dzurisin                | <b>North Reference:</b>             | Grid                   |
| <b>Well:</b>     | Thistle Unit 110H       | <b>Survey Calculation Method:</b>   | Minimum Curvature      |
| <b>Wellbore:</b> | Wellbore #1             |                                     |                        |
| <b>Design:</b>   | Plan 1                  |                                     |                        |

|                    |                |                      |                |
|--------------------|----------------|----------------------|----------------|
| <b>Project</b>     | PBNM           |                      |                |
| <b>Map System:</b> | Flat Earth     | <b>System Datum:</b> | Mean Sea Level |
| <b>Geo Datum:</b>  | WGS 1984       |                      |                |
| <b>Map Zone:</b>   | No Conversions |                      |                |

|                       |          |              |                 |                   |          |
|-----------------------|----------|--------------|-----------------|-------------------|----------|
| Site                  | Dzurisin |              |                 |                   |          |
| Site Position:        |          | Northing:    | 429,922.27 usft | Latitude:         | 0.000000 |
| From:                 | Map      | Easting:     | 725,391.41 usft | Longitude:        | 0.000000 |
| Position Uncertainty: | 0.00 ft  | Slot Radius: | 13-3/16 "       | Grid Convergence: |          |

|                      |                   |              |                     |                 |               |             |
|----------------------|-------------------|--------------|---------------------|-----------------|---------------|-------------|
| Well                 | Thistle Unit 110H |              |                     |                 |               |             |
| Well Position        | +N/-S             | 42,578.96 ft | Northing:           | 472,501.14 usft | Latitude:     | 0.000000    |
|                      | +E/-W             | 53,891.55 ft | Easting:            | 779,282.85 usft | Longitude:    | 0.000000    |
| Position Uncertainty |                   | 0.00 ft      | Wellhead Elevation: | 0.00 ft         | Ground Level: | 3,711.20 ft |

|                  |                   |                    |                        |                      |                            |
|------------------|-------------------|--------------------|------------------------|----------------------|----------------------------|
| <b>Wellbore</b>  | Wellbore #1       |                    |                        |                      |                            |
| <b>Magnetics</b> | <b>Model Name</b> | <b>Sample Date</b> | <b>Declination (°)</b> | <b>Dip Angle (°)</b> | <b>Field Strength (nT)</b> |
|                  | User Defined      | 6/20/2016          | 0.00                   | 0.00                 | 0                          |

|                          |                              |                   |                      |                      |
|--------------------------|------------------------------|-------------------|----------------------|----------------------|
| <b>Design</b>            | Plan 1                       |                   |                      |                      |
| <b>Audit Notes:</b>      |                              |                   |                      |                      |
| <b>Version:</b>          | <b>Phase:</b>                | PROTOTYPE         | <b>Tie On Depth:</b> | 0.00                 |
| <b>Vertical Section:</b> | <b>Depth From (TVD) (ft)</b> | <b>+N/-S (ft)</b> | <b>+E/-W (ft)</b>    | <b>Direction (°)</b> |
|                          | 0.00                         | 0.00              | 0.00                 | 182.29               |

| Plan Sections       |                 |             |                     |            |            |                         |                        |                       |         |                       |
|---------------------|-----------------|-------------|---------------------|------------|------------|-------------------------|------------------------|-----------------------|---------|-----------------------|
| Measured Depth (ft) | Inclination (°) | Azimuth (°) | Vertical Depth (ft) | +N/-S (ft) | +E/-W (ft) | Dogleg Rate (°/100usft) | Build Rate (°/100usft) | Turn Rate (°/100usft) | TFO (°) | Target                |
| 0.00                | 0.00            | 0.00        | 0.00                | 0.00       | 0.00       | 0.00                    | 0.00                   | 0.00                  | 0.00    |                       |
| 6,000.00            | 0.00            | 0.00        | 6,000.00            | 0.00       | 0.00       | 0.00                    | 0.00                   | 0.00                  | 0.00    |                       |
| 6,500.00            | 5.00            | 270.00      | 6,499.37            | 0.00       | -21.80     | 1.00                    | 1.00                   | 0.00                  | 270.00  |                       |
| 9,265.50            | 5.00            | 270.00      | 9,254.34            | 0.00       | -262.83    | 0.00                    | 0.00                   | 0.00                  | 0.00    |                       |
| 10,013.18           | 89.72           | 180.00      | 9,730.00            | -475.14    | -304.24    | 12.00                   | 11.33                  | -12.04                | -90.02  |                       |
| 10,016.55           | 89.72           | 180.00      | 9,730.02            | -478.51    | -304.24    | 0.03                    | -0.03                  | -0.01                 | -161.07 |                       |
| 17,145.45           | 89.72           | 180.00      | 9,764.98            | -7,607.33  | -304.20    | 0.00                    | 0.00                   | 0.00                  | 0.00    |                       |
| 17,148.83           | 89.72           | 180.00      | 9,765.00            | -7,610.71  | -304.20    | 0.03                    | 0.03                   | 0.01                  | 18.93   | Thistle Unit 110H BHL |

**Devon Energy**  
Planning Report

|                  |                         |                                     |                        |
|------------------|-------------------------|-------------------------------------|------------------------|
| <b>Database:</b> | EDM r5000 US Production | <b>Local Co-ordinate Reference:</b> | Well Thistle Unit 110H |
| <b>Company:</b>  | WESTERN DIVISION        | <b>TVD Reference:</b>               | 1 @ 3734.70ft          |
| <b>Project:</b>  | PBNM                    | <b>MD Reference:</b>                | 1 @ 3734.70ft          |
| <b>Site:</b>     | Dzurisin                | <b>North Reference:</b>             | Grid                   |
| <b>Well:</b>     | Thistle Unit 110H       | <b>Survey Calculation Method:</b>   | Minimum Curvature      |
| <b>Wellbore:</b> | Wellbore #1             |                                     |                        |
| <b>Design:</b>   | Plan 1                  |                                     |                        |

| Planned Survey         |                    |                |                        |               |               |                          |                            |                           |                          |  |
|------------------------|--------------------|----------------|------------------------|---------------|---------------|--------------------------|----------------------------|---------------------------|--------------------------|--|
| Measured Depth<br>(ft) | Inclination<br>(°) | Azimuth<br>(°) | Vertical Depth<br>(ft) | +N/-S<br>(ft) | +E/-W<br>(ft) | Vertical Section<br>(ft) | Dogleg Rate<br>(°/100usft) | Build Rate<br>(°/100usft) | Turn Rate<br>(°/100usft) |  |
| 0.00                   | 0.00               | 0.00           | 0.00                   | 0.00          | 0.00          | 0.00                     | 0.00                       | 0.00                      | 0.00                     |  |
| 100.00                 | 0.00               | 0.00           | 100.00                 | 0.00          | 0.00          | 0.00                     | 0.00                       | 0.00                      | 0.00                     |  |
| 200.00                 | 0.00               | 0.00           | 200.00                 | 0.00          | 0.00          | 0.00                     | 0.00                       | 0.00                      | 0.00                     |  |
| 300.00                 | 0.00               | 0.00           | 300.00                 | 0.00          | 0.00          | 0.00                     | 0.00                       | 0.00                      | 0.00                     |  |
| 400.00                 | 0.00               | 0.00           | 400.00                 | 0.00          | 0.00          | 0.00                     | 0.00                       | 0.00                      | 0.00                     |  |
| 500.00                 | 0.00               | 0.00           | 500.00                 | 0.00          | 0.00          | 0.00                     | 0.00                       | 0.00                      | 0.00                     |  |
| 600.00                 | 0.00               | 0.00           | 600.00                 | 0.00          | 0.00          | 0.00                     | 0.00                       | 0.00                      | 0.00                     |  |
| 700.00                 | 0.00               | 0.00           | 700.00                 | 0.00          | 0.00          | 0.00                     | 0.00                       | 0.00                      | 0.00                     |  |
| 800.00                 | 0.00               | 0.00           | 800.00                 | 0.00          | 0.00          | 0.00                     | 0.00                       | 0.00                      | 0.00                     |  |
| 900.00                 | 0.00               | 0.00           | 900.00                 | 0.00          | 0.00          | 0.00                     | 0.00                       | 0.00                      | 0.00                     |  |
| 1,000.00               | 0.00               | 0.00           | 1,000.00               | 0.00          | 0.00          | 0.00                     | 0.00                       | 0.00                      | 0.00                     |  |
| 1,100.00               | 0.00               | 0.00           | 1,100.00               | 0.00          | 0.00          | 0.00                     | 0.00                       | 0.00                      | 0.00                     |  |
| 1,200.00               | 0.00               | 0.00           | 1,200.00               | 0.00          | 0.00          | 0.00                     | 0.00                       | 0.00                      | 0.00                     |  |
| 1,300.00               | 0.00               | 0.00           | 1,300.00               | 0.00          | 0.00          | 0.00                     | 0.00                       | 0.00                      | 0.00                     |  |
| 1,400.00               | 0.00               | 0.00           | 1,400.00               | 0.00          | 0.00          | 0.00                     | 0.00                       | 0.00                      | 0.00                     |  |
| 1,500.00               | 0.00               | 0.00           | 1,500.00               | 0.00          | 0.00          | 0.00                     | 0.00                       | 0.00                      | 0.00                     |  |
| 1,600.00               | 0.00               | 0.00           | 1,600.00               | 0.00          | 0.00          | 0.00                     | 0.00                       | 0.00                      | 0.00                     |  |
| 1,700.00               | 0.00               | 0.00           | 1,700.00               | 0.00          | 0.00          | 0.00                     | 0.00                       | 0.00                      | 0.00                     |  |
| 1,800.00               | 0.00               | 0.00           | 1,800.00               | 0.00          | 0.00          | 0.00                     | 0.00                       | 0.00                      | 0.00                     |  |
| 1,900.00               | 0.00               | 0.00           | 1,900.00               | 0.00          | 0.00          | 0.00                     | 0.00                       | 0.00                      | 0.00                     |  |
| 2,000.00               | 0.00               | 0.00           | 2,000.00               | 0.00          | 0.00          | 0.00                     | 0.00                       | 0.00                      | 0.00                     |  |
| 2,100.00               | 0.00               | 0.00           | 2,100.00               | 0.00          | 0.00          | 0.00                     | 0.00                       | 0.00                      | 0.00                     |  |
| 2,200.00               | 0.00               | 0.00           | 2,200.00               | 0.00          | 0.00          | 0.00                     | 0.00                       | 0.00                      | 0.00                     |  |
| 2,300.00               | 0.00               | 0.00           | 2,300.00               | 0.00          | 0.00          | 0.00                     | 0.00                       | 0.00                      | 0.00                     |  |
| 2,400.00               | 0.00               | 0.00           | 2,400.00               | 0.00          | 0.00          | 0.00                     | 0.00                       | 0.00                      | 0.00                     |  |
| 2,500.00               | 0.00               | 0.00           | 2,500.00               | 0.00          | 0.00          | 0.00                     | 0.00                       | 0.00                      | 0.00                     |  |
| 2,600.00               | 0.00               | 0.00           | 2,600.00               | 0.00          | 0.00          | 0.00                     | 0.00                       | 0.00                      | 0.00                     |  |
| 2,700.00               | 0.00               | 0.00           | 2,700.00               | 0.00          | 0.00          | 0.00                     | 0.00                       | 0.00                      | 0.00                     |  |
| 2,800.00               | 0.00               | 0.00           | 2,800.00               | 0.00          | 0.00          | 0.00                     | 0.00                       | 0.00                      | 0.00                     |  |
| 2,900.00               | 0.00               | 0.00           | 2,900.00               | 0.00          | 0.00          | 0.00                     | 0.00                       | 0.00                      | 0.00                     |  |
| 3,000.00               | 0.00               | 0.00           | 3,000.00               | 0.00          | 0.00          | 0.00                     | 0.00                       | 0.00                      | 0.00                     |  |
| 3,100.00               | 0.00               | 0.00           | 3,100.00               | 0.00          | 0.00          | 0.00                     | 0.00                       | 0.00                      | 0.00                     |  |
| 3,200.00               | 0.00               | 0.00           | 3,200.00               | 0.00          | 0.00          | 0.00                     | 0.00                       | 0.00                      | 0.00                     |  |
| 3,300.00               | 0.00               | 0.00           | 3,300.00               | 0.00          | 0.00          | 0.00                     | 0.00                       | 0.00                      | 0.00                     |  |
| 3,400.00               | 0.00               | 0.00           | 3,400.00               | 0.00          | 0.00          | 0.00                     | 0.00                       | 0.00                      | 0.00                     |  |
| 3,500.00               | 0.00               | 0.00           | 3,500.00               | 0.00          | 0.00          | 0.00                     | 0.00                       | 0.00                      | 0.00                     |  |
| 3,600.00               | 0.00               | 0.00           | 3,600.00               | 0.00          | 0.00          | 0.00                     | 0.00                       | 0.00                      | 0.00                     |  |
| 3,700.00               | 0.00               | 0.00           | 3,700.00               | 0.00          | 0.00          | 0.00                     | 0.00                       | 0.00                      | 0.00                     |  |
| 3,800.00               | 0.00               | 0.00           | 3,800.00               | 0.00          | 0.00          | 0.00                     | 0.00                       | 0.00                      | 0.00                     |  |
| 3,900.00               | 0.00               | 0.00           | 3,900.00               | 0.00          | 0.00          | 0.00                     | 0.00                       | 0.00                      | 0.00                     |  |
| 4,000.00               | 0.00               | 0.00           | 4,000.00               | 0.00          | 0.00          | 0.00                     | 0.00                       | 0.00                      | 0.00                     |  |
| 4,100.00               | 0.00               | 0.00           | 4,100.00               | 0.00          | 0.00          | 0.00                     | 0.00                       | 0.00                      | 0.00                     |  |
| 4,200.00               | 0.00               | 0.00           | 4,200.00               | 0.00          | 0.00          | 0.00                     | 0.00                       | 0.00                      | 0.00                     |  |
| 4,300.00               | 0.00               | 0.00           | 4,300.00               | 0.00          | 0.00          | 0.00                     | 0.00                       | 0.00                      | 0.00                     |  |
| 4,400.00               | 0.00               | 0.00           | 4,400.00               | 0.00          | 0.00          | 0.00                     | 0.00                       | 0.00                      | 0.00                     |  |
| 4,500.00               | 0.00               | 0.00           | 4,500.00               | 0.00          | 0.00          | 0.00                     | 0.00                       | 0.00                      | 0.00                     |  |
| 4,600.00               | 0.00               | 0.00           | 4,600.00               | 0.00          | 0.00          | 0.00                     | 0.00                       | 0.00                      | 0.00                     |  |
| 4,700.00               | 0.00               | 0.00           | 4,700.00               | 0.00          | 0.00          | 0.00                     | 0.00                       | 0.00                      | 0.00                     |  |
| 4,800.00               | 0.00               | 0.00           | 4,800.00               | 0.00          | 0.00          | 0.00                     | 0.00                       | 0.00                      | 0.00                     |  |
| 4,900.00               | 0.00               | 0.00           | 4,900.00               | 0.00          | 0.00          | 0.00                     | 0.00                       | 0.00                      | 0.00                     |  |
| 5,000.00               | 0.00               | 0.00           | 5,000.00               | 0.00          | 0.00          | 0.00                     | 0.00                       | 0.00                      | 0.00                     |  |
| 5,100.00               | 0.00               | 0.00           | 5,100.00               | 0.00          | 0.00          | 0.00                     | 0.00                       | 0.00                      | 0.00                     |  |
| 5,200.00               | 0.00               | 0.00           | 5,200.00               | 0.00          | 0.00          | 0.00                     | 0.00                       | 0.00                      | 0.00                     |  |
| 5,300.00               | 0.00               | 0.00           | 5,300.00               | 0.00          | 0.00          | 0.00                     | 0.00                       | 0.00                      | 0.00                     |  |

# Devon Energy

## Planning Report

Database: EDM r5000 US Production  
Company: WESTERN DIVISION  
Project: PBNM  
Site: Dzurisin  
Well: Thistle Unit 110H  
Wellbore: Wellbore #1  
Design: Plan 1

Local Co-ordinate Reference: Well Thistle Unit 110H  
TVD Reference: 1 @ 3734.70ft  
MD Reference: 1 @ 3734.70ft  
North Reference: Grid  
Survey Calculation Method: Minimum Curvature

### Planned Survey

| Measured Depth (ft) | Inclination (°) | Azimuth (°) | Vertical Depth (ft) | +N/-S (ft) | +E/-W (ft) | Vertical Section (ft) | Dogleg Rate (°/100usft) | Build Rate (°/100usft) | Turn Rate (°/100usft) |
|---------------------|-----------------|-------------|---------------------|------------|------------|-----------------------|-------------------------|------------------------|-----------------------|
| 5,400.00            | 0.00            | 0.00        | 5,400.00            | 0.00       | 0.00       | 0.00                  | 0.00                    | 0.00                   | 0.00                  |
| 5,500.00            | 0.00            | 0.00        | 5,500.00            | 0.00       | 0.00       | 0.00                  | 0.00                    | 0.00                   | 0.00                  |
| 5,600.00            | 0.00            | 0.00        | 5,600.00            | 0.00       | 0.00       | 0.00                  | 0.00                    | 0.00                   | 0.00                  |
| 5,700.00            | 0.00            | 0.00        | 5,700.00            | 0.00       | 0.00       | 0.00                  | 0.00                    | 0.00                   | 0.00                  |
| 5,800.00            | 0.00            | 0.00        | 5,800.00            | 0.00       | 0.00       | 0.00                  | 0.00                    | 0.00                   | 0.00                  |
| 5,900.00            | 0.00            | 0.00        | 5,900.00            | 0.00       | 0.00       | 0.00                  | 0.00                    | 0.00                   | 0.00                  |
| 6,000.00            | 0.00            | 0.00        | 6,000.00            | 0.00       | 0.00       | 0.00                  | 0.00                    | 0.00                   | 0.00                  |
| 6,100.00            | 1.00            | 270.00      | 6,100.00            | 0.00       | -0.87      | 0.03                  | 1.00                    | 1.00                   | 0.00                  |
| 6,200.00            | 2.00            | 270.00      | 6,199.96            | 0.00       | -3.49      | 0.14                  | 1.00                    | 1.00                   | 0.00                  |
| 6,300.00            | 3.00            | 270.00      | 6,299.86            | 0.00       | -7.85      | 0.31                  | 1.00                    | 1.00                   | 0.00                  |
| 6,400.00            | 4.00            | 270.00      | 6,399.68            | 0.00       | -13.96     | 0.56                  | 1.00                    | 1.00                   | 0.00                  |
| 6,500.00            | 5.00            | 270.00      | 6,499.37            | 0.00       | -21.80     | 0.87                  | 1.00                    | 1.00                   | 0.00                  |
| 6,600.00            | 5.00            | 270.00      | 6,598.99            | 0.00       | -30.52     | 1.22                  | 0.00                    | 0.00                   | 0.00                  |
| 6,700.00            | 5.00            | 270.00      | 6,698.60            | 0.00       | -39.23     | 1.57                  | 0.00                    | 0.00                   | 0.00                  |
| 6,800.00            | 5.00            | 270.00      | 6,798.22            | 0.00       | -47.95     | 1.92                  | 0.00                    | 0.00                   | 0.00                  |
| 6,900.00            | 5.00            | 270.00      | 6,897.84            | 0.00       | -56.67     | 2.26                  | 0.00                    | 0.00                   | 0.00                  |
| 7,000.00            | 5.00            | 270.00      | 6,997.46            | 0.00       | -65.38     | 2.61                  | 0.00                    | 0.00                   | 0.00                  |
| 7,100.00            | 5.00            | 270.00      | 7,097.08            | 0.00       | -74.10     | 2.96                  | 0.00                    | 0.00                   | 0.00                  |
| 7,200.00            | 5.00            | 270.00      | 7,196.70            | 0.00       | -82.81     | 3.31                  | 0.00                    | 0.00                   | 0.00                  |
| 7,300.00            | 5.00            | 270.00      | 7,296.32            | 0.00       | -91.53     | 3.66                  | 0.00                    | 0.00                   | 0.00                  |
| 7,400.00            | 5.00            | 270.00      | 7,395.94            | 0.00       | -100.24    | 4.00                  | 0.00                    | 0.00                   | 0.00                  |
| 7,500.00            | 5.00            | 270.00      | 7,495.56            | 0.00       | -108.96    | 4.35                  | 0.00                    | 0.00                   | 0.00                  |
| 7,600.00            | 5.00            | 270.00      | 7,595.18            | 0.00       | -117.67    | 4.70                  | 0.00                    | 0.00                   | 0.00                  |
| 7,700.00            | 5.00            | 270.00      | 7,694.80            | 0.00       | -126.39    | 5.05                  | 0.00                    | 0.00                   | 0.00                  |
| 7,800.00            | 5.00            | 270.00      | 7,794.42            | 0.00       | -135.11    | 5.40                  | 0.00                    | 0.00                   | 0.00                  |
| 7,900.00            | 5.00            | 270.00      | 7,894.04            | 0.00       | -143.82    | 5.74                  | 0.00                    | 0.00                   | 0.00                  |
| 8,000.00            | 5.00            | 270.00      | 7,993.66            | 0.00       | -152.54    | 6.09                  | 0.00                    | 0.00                   | 0.00                  |
| 8,100.00            | 5.00            | 270.00      | 8,093.28            | 0.00       | -161.25    | 6.44                  | 0.00                    | 0.00                   | 0.00                  |
| 8,200.00            | 5.00            | 270.00      | 8,192.90            | 0.00       | -169.97    | 6.79                  | 0.00                    | 0.00                   | 0.00                  |
| 8,300.00            | 5.00            | 270.00      | 8,292.52            | 0.00       | -178.68    | 7.14                  | 0.00                    | 0.00                   | 0.00                  |
| 8,400.00            | 5.00            | 270.00      | 8,392.14            | 0.00       | -187.40    | 7.48                  | 0.00                    | 0.00                   | 0.00                  |
| 8,500.00            | 5.00            | 270.00      | 8,491.76            | 0.00       | -196.11    | 7.83                  | 0.00                    | 0.00                   | 0.00                  |
| 8,600.00            | 5.00            | 270.00      | 8,591.37            | 0.00       | -204.83    | 8.18                  | 0.00                    | 0.00                   | 0.00                  |
| 8,700.00            | 5.00            | 270.00      | 8,690.99            | 0.00       | -213.55    | 8.53                  | 0.00                    | 0.00                   | 0.00                  |
| 8,800.00            | 5.00            | 270.00      | 8,790.61            | 0.00       | -222.26    | 8.88                  | 0.00                    | 0.00                   | 0.00                  |
| 8,900.00            | 5.00            | 270.00      | 8,890.23            | 0.00       | -230.98    | 9.22                  | 0.00                    | 0.00                   | 0.00                  |
| 9,000.00            | 5.00            | 270.00      | 8,989.85            | 0.00       | -239.69    | 9.57                  | 0.00                    | 0.00                   | 0.00                  |
| 9,100.00            | 5.00            | 270.00      | 9,089.47            | 0.00       | -248.41    | 9.92                  | 0.00                    | 0.00                   | 0.00                  |
| 9,200.00            | 5.00            | 270.00      | 9,189.09            | 0.00       | -257.12    | 10.27                 | 0.00                    | 0.00                   | 0.00                  |
| 9,265.50            | 5.00            | 270.00      | 9,254.34            | 0.00       | -262.83    | 10.50                 | 0.00                    | 0.00                   | 0.00                  |
| 9,275.00            | 5.13            | 257.14      | 9,263.81            | -0.09      | -263.66    | 10.62                 | 12.00                   | 1.34                   | -135.39               |
| 9,300.00            | 6.49            | 230.28      | 9,288.68            | -1.25      | -265.84    | 11.86                 | 12.00                   | 5.44                   | -107.43               |
| 9,325.00            | 8.71            | 214.81      | 9,313.46            | -3.70      | -268.00    | 14.40                 | 12.00                   | 8.88                   | -61.87                |
| 9,350.00            | 11.29           | 205.96      | 9,338.08            | -7.46      | -270.16    | 18.24                 | 12.00                   | 10.34                  | -35.41                |
| 9,375.00            | 14.04           | 200.45      | 9,362.47            | -12.50     | -272.29    | 23.37                 | 12.00                   | 11.00                  | -22.04                |
| 9,400.00            | 16.87           | 196.74      | 9,386.57            | -18.82     | -274.39    | 29.76                 | 12.00                   | 11.33                  | -14.85                |
| 9,425.00            | 19.76           | 194.07      | 9,410.30            | -26.39     | -276.47    | 37.41                 | 12.00                   | 11.53                  | -10.66                |
| 9,450.00            | 22.67           | 192.07      | 9,433.60            | -35.21     | -278.50    | 46.30                 | 12.00                   | 11.64                  | -8.03                 |
| 9,475.00            | 25.60           | 190.50      | 9,456.41            | -45.23     | -280.49    | 56.40                 | 12.00                   | 11.72                  | -6.28                 |
| 9,500.00            | 28.54           | 189.23      | 9,478.67            | -56.44     | -282.43    | 67.67                 | 12.00                   | 11.78                  | -5.06                 |
| 9,525.00            | 31.50           | 188.18      | 9,500.32            | -68.80     | -284.32    | 80.10                 | 12.00                   | 11.82                  | -4.19                 |
| 9,550.00            | 34.46           | 187.30      | 9,521.29            | -82.28     | -286.15    | 93.64                 | 12.00                   | 11.84                  | -3.54                 |
| 9,575.00            | 37.42           | 186.54      | 9,541.53            | -96.85     | -287.92    | 108.27                | 12.00                   | 11.87                  | -3.04                 |
| 9,600.00            | 40.40           | 185.88      | 9,560.98            | -112.46    | -289.61    | 123.93                | 12.00                   | 11.88                  | -2.65                 |

# Devon Energy

## Planning Report

Database: EDM r5000 US Production  
Company: WESTERN DIVISION  
Project: PBNM  
Site: Dzurisin  
Well: Thistle Unit 110H  
Wellbore: Wellbore #1  
Design: Plan 1

Local Co-ordinate Reference:  
TVD Reference:  
MD Reference:  
North Reference:  
Survey Calculation Method:

Well Thistle Unit 110H  
1 @ 3734.70ft  
1 @ 3734.70ft  
Grid  
Minimum Curvature

### Planned Survey

| Measured Depth (ft) | Inclination (°) | Azimuth (°) | Vertical Depth (ft) | +N/-S (ft) | +E/-W (ft) | Vertical Section (ft) | Dogleg Rate (°/100usft) | Build Rate (°/100usft) | Turn Rate (°/100usft) |
|---------------------|-----------------|-------------|---------------------|------------|------------|-----------------------|-------------------------|------------------------|-----------------------|
| 9,625.00            | 43.37           | 185.29      | 9,579.59            | -129.07    | -291.23    | 140.59                | 12.00                   | 11.90                  | -2.35                 |
| 9,650.00            | 46.35           | 184.76      | 9,597.31            | -146.63    | -292.77    | 158.21                | 12.00                   | 11.91                  | -2.10                 |
| 9,675.00            | 49.33           | 184.29      | 9,614.09            | -165.10    | -294.23    | 176.72                | 12.00                   | 11.92                  | -1.91                 |
| 9,700.00            | 52.31           | 183.85      | 9,629.88            | -184.43    | -295.61    | 196.09                | 12.00                   | 11.92                  | -1.74                 |
| 9,725.00            | 55.29           | 183.45      | 9,644.64            | -204.56    | -296.89    | 216.25                | 12.00                   | 11.93                  | -1.61                 |
| 9,750.00            | 58.27           | 183.08      | 9,658.34            | -225.44    | -298.08    | 237.16                | 12.00                   | 11.93                  | -1.50                 |
| 9,775.00            | 61.26           | 182.73      | 9,670.93            | -247.01    | -299.17    | 258.76                | 12.00                   | 11.94                  | -1.40                 |
| 9,800.00            | 64.24           | 182.39      | 9,682.37            | -269.21    | -300.16    | 280.98                | 12.00                   | 11.94                  | -1.32                 |
| 9,825.00            | 67.23           | 182.08      | 9,692.64            | -291.98    | -301.05    | 303.77                | 12.00                   | 11.95                  | -1.26                 |
| 9,850.00            | 70.22           | 181.78      | 9,701.71            | -315.26    | -301.84    | 327.06                | 12.00                   | 11.95                  | -1.20                 |
| 9,875.00            | 73.20           | 181.49      | 9,709.56            | -338.98    | -302.51    | 350.79                | 12.00                   | 11.95                  | -1.16                 |
| 9,900.00            | 76.19           | 181.21      | 9,716.16            | -363.09    | -303.08    | 374.90                | 12.00                   | 11.95                  | -1.12                 |
| 9,925.00            | 79.18           | 180.93      | 9,721.49            | -387.51    | -303.54    | 399.32                | 12.00                   | 11.95                  | -1.10                 |
| 9,950.00            | 82.17           | 180.67      | 9,725.54            | -412.17    | -303.88    | 423.98                | 12.00                   | 11.95                  | -1.07                 |
| 9,975.00            | 85.16           | 180.40      | 9,728.30            | -437.01    | -304.11    | 448.81                | 12.00                   | 11.95                  | -1.06                 |
| 10,000.00           | 88.14           | 180.14      | 9,729.76            | -461.97    | -304.23    | 473.75                | 12.00                   | 11.95                  | -1.05                 |
| 10,013.18           | 89.72           | 180.00      | 9,730.00            | -475.14    | -304.24    | 486.91                | 12.00                   | 11.95                  | -1.05                 |
| 10,016.55           | 89.72           | 180.00      | 9,730.02            | -478.51    | -304.24    | 490.28                | 0.03                    | -0.03                  | -0.01                 |
| 10,100.00           | 89.72           | 180.00      | 9,730.43            | -561.96    | -304.24    | 573.67                | 0.00                    | 0.00                   | 0.00                  |
| 10,200.00           | 89.72           | 180.00      | 9,730.92            | -661.96    | -304.24    | 673.58                | 0.00                    | 0.00                   | 0.00                  |
| 10,300.00           | 89.72           | 180.00      | 9,731.41            | -761.96    | -304.24    | 773.50                | 0.00                    | 0.00                   | 0.00                  |
| 10,400.00           | 89.72           | 180.00      | 9,731.90            | -861.96    | -304.24    | 873.42                | 0.00                    | 0.00                   | 0.00                  |
| 10,500.00           | 89.72           | 180.00      | 9,732.39            | -961.96    | -304.24    | 973.34                | 0.00                    | 0.00                   | 0.00                  |
| 10,600.00           | 89.72           | 180.00      | 9,732.88            | -1,061.96  | -304.24    | 1,073.26              | 0.00                    | 0.00                   | 0.00                  |
| 10,700.00           | 89.72           | 180.00      | 9,733.37            | -1,161.96  | -304.24    | 1,173.18              | 0.00                    | 0.00                   | 0.00                  |
| 10,800.00           | 89.72           | 180.00      | 9,733.86            | -1,261.95  | -304.24    | 1,273.10              | 0.00                    | 0.00                   | 0.00                  |
| 10,900.00           | 89.72           | 180.00      | 9,734.35            | -1,361.95  | -304.24    | 1,373.02              | 0.00                    | 0.00                   | 0.00                  |
| 11,000.00           | 89.72           | 180.00      | 9,734.84            | -1,461.95  | -304.24    | 1,472.94              | 0.00                    | 0.00                   | 0.00                  |
| 11,100.00           | 89.72           | 180.00      | 9,735.33            | -1,561.95  | -304.24    | 1,572.86              | 0.00                    | 0.00                   | 0.00                  |
| 11,200.00           | 89.72           | 180.00      | 9,735.82            | -1,661.95  | -304.24    | 1,672.77              | 0.00                    | 0.00                   | 0.00                  |
| 11,300.00           | 89.72           | 180.00      | 9,736.31            | -1,761.95  | -304.24    | 1,772.69              | 0.00                    | 0.00                   | 0.00                  |
| 11,400.00           | 89.72           | 180.00      | 9,736.80            | -1,861.95  | -304.24    | 1,872.61              | 0.00                    | 0.00                   | 0.00                  |
| 11,500.00           | 89.72           | 180.00      | 9,737.30            | -1,961.95  | -304.23    | 1,972.53              | 0.00                    | 0.00                   | 0.00                  |
| 11,600.00           | 89.72           | 180.00      | 9,737.79            | -2,061.95  | -304.23    | 2,072.45              | 0.00                    | 0.00                   | 0.00                  |
| 11,700.00           | 89.72           | 180.00      | 9,738.28            | -2,161.94  | -304.23    | 2,172.37              | 0.00                    | 0.00                   | 0.00                  |
| 11,800.00           | 89.72           | 180.00      | 9,738.77            | -2,261.94  | -304.23    | 2,272.29              | 0.00                    | 0.00                   | 0.00                  |
| 11,900.00           | 89.72           | 180.00      | 9,739.26            | -2,361.94  | -304.23    | 2,372.21              | 0.00                    | 0.00                   | 0.00                  |
| 12,000.00           | 89.72           | 180.00      | 9,739.75            | -2,461.94  | -304.23    | 2,472.13              | 0.00                    | 0.00                   | 0.00                  |
| 12,100.00           | 89.72           | 180.00      | 9,740.24            | -2,561.94  | -304.23    | 2,572.05              | 0.00                    | 0.00                   | 0.00                  |
| 12,200.00           | 89.72           | 180.00      | 9,740.73            | -2,661.94  | -304.23    | 2,671.96              | 0.00                    | 0.00                   | 0.00                  |
| 12,300.00           | 89.72           | 180.00      | 9,741.22            | -2,761.94  | -304.23    | 2,771.88              | 0.00                    | 0.00                   | 0.00                  |
| 12,400.00           | 89.72           | 180.00      | 9,741.71            | -2,861.94  | -304.23    | 2,871.80              | 0.00                    | 0.00                   | 0.00                  |
| 12,500.00           | 89.72           | 180.00      | 9,742.20            | -2,961.93  | -304.23    | 2,971.72              | 0.00                    | 0.00                   | 0.00                  |
| 12,600.00           | 89.72           | 180.00      | 9,742.69            | -3,061.93  | -304.23    | 3,071.64              | 0.00                    | 0.00                   | 0.00                  |
| 12,700.00           | 89.72           | 180.00      | 9,743.18            | -3,161.93  | -304.23    | 3,171.56              | 0.00                    | 0.00                   | 0.00                  |
| 12,800.00           | 89.72           | 180.00      | 9,743.67            | -3,261.93  | -304.23    | 3,271.48              | 0.00                    | 0.00                   | 0.00                  |
| 12,900.00           | 89.72           | 180.00      | 9,744.16            | -3,361.93  | -304.23    | 3,371.40              | 0.00                    | 0.00                   | 0.00                  |
| 13,000.00           | 89.72           | 180.00      | 9,744.65            | -3,461.93  | -304.23    | 3,471.32              | 0.00                    | 0.00                   | 0.00                  |
| 13,100.00           | 89.72           | 180.00      | 9,745.14            | -3,561.93  | -304.23    | 3,571.24              | 0.00                    | 0.00                   | 0.00                  |
| 13,200.00           | 89.72           | 180.00      | 9,745.63            | -3,661.93  | -304.22    | 3,671.15              | 0.00                    | 0.00                   | 0.00                  |
| 13,300.00           | 89.72           | 180.00      | 9,746.12            | -3,761.92  | -304.22    | 3,771.07              | 0.00                    | 0.00                   | 0.00                  |
| 13,400.00           | 89.72           | 180.00      | 9,746.61            | -3,861.92  | -304.22    | 3,870.99              | 0.00                    | 0.00                   | 0.00                  |
| 13,500.00           | 89.72           | 180.00      | 9,747.10            | -3,961.92  | -304.22    | 3,970.91              | 0.00                    | 0.00                   | 0.00                  |
| 13,600.00           | 89.72           | 180.00      | 9,747.59            | -4,061.92  | -304.22    | 4,070.83              | 0.00                    | 0.00                   | 0.00                  |

**Devon Energy**  
Planning Report

**Database:** EDM r5000 US Production  
**Company:** WESTERN DIVISION  
**Project:** PBNM  
**Site:** Dzurisin  
**Well:** Thistle Unit 110H  
**Wellbore:** Wellbore #1  
**Design:** Plan 1

**Local Co-ordinate Reference:** Well Thistle Unit 110H  
**TVD Reference:** 1 @ 3734.70ft  
**MD Reference:** 1 @ 3734.70ft  
**North Reference:** Grid  
**Survey Calculation Method:** Minimum Curvature

**Planned Survey**

| Measured Depth (ft) | Inclination (°) | Azimuth (°) | Vertical Depth (ft) | +N/-S (ft) | +E/-W (ft) | Vertical Section (ft) | Dogleg Rate (°/100usft) | Build Rate (°/100usft) | Turn Rate (°/100usft) |
|---------------------|-----------------|-------------|---------------------|------------|------------|-----------------------|-------------------------|------------------------|-----------------------|
| 13,700.00           | 89.72           | 180.00      | 9,748.09            | -4,161.92  | -304.22    | 4,170.75              | 0.00                    | 0.00                   | 0.00                  |
| 13,800.00           | 89.72           | 180.00      | 9,748.58            | -4,261.92  | -304.22    | 4,270.67              | 0.00                    | 0.00                   | 0.00                  |
| 13,900.00           | 89.72           | 180.00      | 9,749.07            | -4,361.92  | -304.22    | 4,370.59              | 0.00                    | 0.00                   | 0.00                  |
| 14,000.00           | 89.72           | 180.00      | 9,749.56            | -4,461.92  | -304.22    | 4,470.51              | 0.00                    | 0.00                   | 0.00                  |
| 14,100.00           | 89.72           | 180.00      | 9,750.05            | -4,561.92  | -304.22    | 4,570.43              | 0.00                    | 0.00                   | 0.00                  |
| 14,200.00           | 89.72           | 180.00      | 9,750.54            | -4,661.91  | -304.22    | 4,670.34              | 0.00                    | 0.00                   | 0.00                  |
| 14,300.00           | 89.72           | 180.00      | 9,751.03            | -4,761.91  | -304.22    | 4,770.26              | 0.00                    | 0.00                   | 0.00                  |
| 14,400.00           | 89.72           | 180.00      | 9,751.52            | -4,861.91  | -304.22    | 4,870.18              | 0.00                    | 0.00                   | 0.00                  |
| 14,500.00           | 89.72           | 180.00      | 9,752.01            | -4,961.91  | -304.22    | 4,970.10              | 0.00                    | 0.00                   | 0.00                  |
| 14,600.00           | 89.72           | 180.00      | 9,752.50            | -5,061.91  | -304.22    | 5,070.02              | 0.00                    | 0.00                   | 0.00                  |
| 14,700.00           | 89.72           | 180.00      | 9,752.99            | -5,161.91  | -304.22    | 5,169.94              | 0.00                    | 0.00                   | 0.00                  |
| 14,800.00           | 89.72           | 180.00      | 9,753.48            | -5,261.91  | -304.21    | 5,269.86              | 0.00                    | 0.00                   | 0.00                  |
| 14,900.00           | 89.72           | 180.00      | 9,753.97            | -5,361.91  | -304.21    | 5,369.78              | 0.00                    | 0.00                   | 0.00                  |
| 15,000.00           | 89.72           | 180.00      | 9,754.46            | -5,461.90  | -304.21    | 5,469.70              | 0.00                    | 0.00                   | 0.00                  |
| 15,100.00           | 89.72           | 180.00      | 9,754.95            | -5,561.90  | -304.21    | 5,569.62              | 0.00                    | 0.00                   | 0.00                  |
| 15,200.00           | 89.72           | 180.00      | 9,755.44            | -5,661.90  | -304.21    | 5,669.53              | 0.00                    | 0.00                   | 0.00                  |
| 15,300.00           | 89.72           | 180.00      | 9,755.93            | -5,761.90  | -304.21    | 5,769.45              | 0.00                    | 0.00                   | 0.00                  |
| 15,400.00           | 89.72           | 180.00      | 9,756.42            | -5,861.90  | -304.21    | 5,869.37              | 0.00                    | 0.00                   | 0.00                  |
| 15,500.00           | 89.72           | 180.00      | 9,756.91            | -5,961.90  | -304.21    | 5,969.29              | 0.00                    | 0.00                   | 0.00                  |
| 15,600.00           | 89.72           | 180.00      | 9,757.40            | -6,061.90  | -304.21    | 6,069.21              | 0.00                    | 0.00                   | 0.00                  |
| 15,700.00           | 89.72           | 180.00      | 9,757.89            | -6,161.90  | -304.21    | 6,169.13              | 0.00                    | 0.00                   | 0.00                  |
| 15,800.00           | 89.72           | 180.00      | 9,758.38            | -6,261.89  | -304.21    | 6,269.05              | 0.00                    | 0.00                   | 0.00                  |
| 15,900.00           | 89.72           | 180.00      | 9,758.88            | -6,361.89  | -304.21    | 6,368.97              | 0.00                    | 0.00                   | 0.00                  |
| 16,000.00           | 89.72           | 180.00      | 9,759.37            | -6,461.89  | -304.21    | 6,468.89              | 0.00                    | 0.00                   | 0.00                  |
| 16,100.00           | 89.72           | 180.00      | 9,759.86            | -6,561.89  | -304.21    | 6,568.81              | 0.00                    | 0.00                   | 0.00                  |
| 16,200.00           | 89.72           | 180.00      | 9,760.35            | -6,661.89  | -304.21    | 6,668.72              | 0.00                    | 0.00                   | 0.00                  |
| 16,300.00           | 89.72           | 180.00      | 9,760.84            | -6,761.89  | -304.21    | 6,768.64              | 0.00                    | 0.00                   | 0.00                  |
| 16,400.00           | 89.72           | 180.00      | 9,761.33            | -6,861.89  | -304.21    | 6,868.56              | 0.00                    | 0.00                   | 0.00                  |
| 16,500.00           | 89.72           | 180.00      | 9,761.82            | -6,961.89  | -304.20    | 6,968.48              | 0.00                    | 0.00                   | 0.00                  |
| 16,600.00           | 89.72           | 180.00      | 9,762.31            | -7,061.89  | -304.20    | 7,068.40              | 0.00                    | 0.00                   | 0.00                  |
| 16,700.00           | 89.72           | 180.00      | 9,762.80            | -7,161.88  | -304.20    | 7,168.32              | 0.00                    | 0.00                   | 0.00                  |
| 16,800.00           | 89.72           | 180.00      | 9,763.29            | -7,261.88  | -304.20    | 7,268.24              | 0.00                    | 0.00                   | 0.00                  |
| 16,900.00           | 89.72           | 180.00      | 9,763.78            | -7,361.88  | -304.20    | 7,368.16              | 0.00                    | 0.00                   | 0.00                  |
| 17,000.00           | 89.72           | 180.00      | 9,764.27            | -7,461.88  | -304.20    | 7,468.08              | 0.00                    | 0.00                   | 0.00                  |
| 17,100.00           | 89.72           | 180.00      | 9,764.76            | -7,561.88  | -304.20    | 7,568.00              | 0.00                    | 0.00                   | 0.00                  |
| 17,145.45           | 89.72           | 180.00      | 9,764.98            | -7,607.33  | -304.20    | 7,613.41              | 0.00                    | 0.00                   | 0.00                  |
| 17,148.83           | 89.72           | 180.00      | 9,765.00            | -7,610.71  | -304.20    | 7,616.78              | 0.03                    | 0.03                   | 0.01                  |

**Design Targets**

| Target Name               | Dip Angle (°) | Dip Dir. (°) | TVD (ft) | +N/-S (ft) | +E/-W (ft) | Northing (usft) | Easting (usft) | Latitude | Longitude |
|---------------------------|---------------|--------------|----------|------------|------------|-----------------|----------------|----------|-----------|
| - hit/miss target         |               |              |          |            |            |                 |                |          |           |
| - Shape                   |               |              |          |            |            |                 |                |          |           |
| Thistle Unit 110H BHL     | 0.00          | 0.00         | 9,765.00 | -7,610.71  | -304.20    | 464,890.45      | 778,978.65     | 0.000000 | 0.000000  |
| - plan hits target center |               |              |          |            |            |                 |                |          |           |
| - Point                   |               |              |          |            |            |                 |                |          |           |